Webinar

Global Sustainability Outlook 2026

Date: January 22, 2026

00:00:04 --> 00:00:05: Hi everyone.
00:00:05 --> 00:00:11: Welcome, welcome, welcome.
00:00:12 --> 00:00:14: Happy Wednesday.
00:00:29 --> 00:00:30: Welcome, everyone.
00:00:30 --> 00:00:35: Good morning or good afternoon depending on where you are.
00:00:36 --> 00:00:37: Thank you for joining.
00:00:43 --> 00:00:45: Hello, everybody, Welcome.
00:00:45 --> 00:00:48: I'll give folks just another minute to join here and
00:00:48 --> 00:00:50: then we can go ahead and get started.
00:01:11 --> 00:01:12: Welcome in.
00:01:12 --> 00:01:14: I see folks are trickling in.
00:01:25 --> 00:01:28: All right, let's go ahead and get started.
00:01:29 --> 00:01:34: Hello everyone, and welcome today's to today's webinar on the
00:01:34 --> 00:01:39: newest ULA publication ULA Global Sustainability Outlook 2026.
00:01:40 --> 00:01:43: We are really happy to bring together industry leaders on
00:01:43 --> 00:01:48: key topics surrounding sustainability and real estate to discuss the
00:01:48 --> 00:01:50: findings of this report.
00:01:50 --> 00:01:55: So before we jump into introductions, a few quick notes.
00:01:55 --> 00:01:58: This webinar will be recorded and we will be sharing
00:01:58 --> 00:02:01: it on Knowledge Finder after the webinar.
00:02:02 --> 00:02:04: It will be publicly available there.
00:02:04 --> 00:02:07: And as we go through the webinar, if you have
00:02:07 --> 00:02:10: any questions, please put them in the Q&A box and
00:02:10 --> 00:02:14: we'll do our best to respond to those during the
00:02:14 --> 00:02:17: discussion or during the Q&A section at the very end
00:02:17 --> 00:02:21: because we have a lot of fantastic panelists today.
00:02:21 --> 00:02:24: I'll let everyone introduce themselves in a bit, but for
00:02:24 --> 00:02:27: now, a quick set of introductions.

00:02:27 --> 00:02:31: I'm Shreya Madhu, Manager on the decarbonization program with the

00:02:31 --> 00:02:35: Uli Randall Lewis Center for Sustainability, and I worked on

00:02:35 --> 00:02:38: this project with our Senior Director of the D Car

00:02:38 --> 00:02:43: program, Kara Coconut, and Lucy Scott, who's a financial journalist

00:02:43 --> 00:02:44: based in the UK.

00:02:44 --> 00:02:48: We also have our four amazing panelists who all participated

00:02:48 --> 00:02:52: in the roundtable discussions that informed this publication.

00:02:52 --> 00:02:57: We have all Sandra Besagni, Jocelyn Hittle, Mina Hassman, and

00:02:57 --> 00:03:02: Reeves Taylor, so each year the Global Sustainability Outlook report

00:03:02 --> 00:03:07: is informed by a set of roundtable conversations with sustainability

00:03:08 --> 00:03:08: experts.

00:03:09 --> 00:03:12: In late 2025, we interviewed over 50 ULI member experts

00:03:13 --> 00:03:15: across the globe to inform the outlook.

00:03:16 --> 00:03:20: As is typical with the process, we interviewed members of

00:03:20 --> 00:03:23: the three ULI Product Councils, the Asia Pacific Net 0

00:03:23 --> 00:03:29: Council, the Europe Sustainability Council, and the America Sustainable Development

00:03:29 --> 00:03:29: Council.

00:03:30 --> 00:03:33: But this year we also held an additional roundtable to

00:03:33 --> 00:03:38: include the Voices of District and National Council Sustainability committees

00:03:38 --> 00:03:41: to see a more whole picture of what's ahead in

00:03:41 --> 00:03:42: 2026.

00:03:42 --> 00:03:45: And we kicked off all our roundtables with one major

00:03:45 --> 00:03:49: question, which is what sustainability topics and issues are on

00:03:50 --> 00:03:50: the rise?

00:03:50 --> 00:03:53: Why do they matter, and what actions should the industry

00:03:53 --> 00:03:54: pursue moving forward?

00:03:57 --> 00:04:00: So we're now in the sixth year of Global Sustainability

00:04:00 --> 00:04:04: Outlooks, where we take these roundtable conversations and synthesize them

00:04:04 --> 00:04:07: into the top five issues to lookout for in the

00:04:07 --> 00:04:08: upcoming year.

00:04:09 --> 00:04:12: This project started off as a full length report the

00:04:12 --> 00:04:15: first several years, but in 2024, metrics showed that the

00:04:15 --> 00:04:19: summary article highlighting the top five themes was actually garnering

00:04:19 --> 00:04:21: higher viewership and engagement.

00:04:22 --> 00:04:25: So we switched gears to an Urban Land Online article
00:04:25 --> 00:04:28: in 2025 and that's what we did this year for
00:04:28 --> 00:04:29: 2026.
00:04:31 --> 00:04:35: So I highly recommend visiting this QR code or using
00:04:35 --> 00:04:38: the short URL to view the article and quickly go
00:04:38 --> 00:04:39: over the results.
00:04:39 --> 00:04:42: I'll give you all just a second here to click
00:04:42 --> 00:04:44: on this and take a look at the article and
00:04:44 --> 00:04:47: some of the insights that our experts shared.
00:04:55 --> 00:04:58: All right, Now just to quickly go over the agenda,
00:04:59 --> 00:05:02: we'll start with introductions and then reflect on how the
00:05:02 --> 00:05:05: top five topics have shifted over the years since the
00:05:05 --> 00:05:07: first year in 2020.
00:05:07 --> 00:05:10: The discussion will then shift to an overview of the
00:05:10 --> 00:05:14: five key themes for 2026 before moving forward with the
00:05:14 --> 00:05:17: panelists discussion, which will be the bulk of the hour
00:05:17 --> 00:05:19: and we hope for it to be a free flowing
00:05:19 --> 00:05:22: discussion with our four expert panelists.
00:05:22 --> 00:05:26: Again, please feel free to contribute your thoughts and questions
00:05:26 --> 00:05:29: in the chat or Q&A box so our panelists can
00:05:29 --> 00:05:32: address them at the end during the Q&A section.
00:05:32 --> 00:05:35: So without further ado, I'll pass it over to Kara
00:05:36 --> 00:05:37: for introductions.
00:05:40 --> 00:05:43: Hello everyone, it's great to see everyone on here today.
00:05:44 --> 00:05:49: I see the numbers trickling in, which is very exciting.
00:05:49 --> 00:05:53: We'd love to have this webinar every year to share
00:05:53 --> 00:05:57: what we see is ahead in 2026 across sustainability experts.
00:05:58 --> 00:06:01: As Shreya had mentioned, I am Kara Kokernak, a senior
00:06:01 --> 00:06:05: Director at the Urban Land Institute, and have been involved
00:06:05 --> 00:06:09: with the global sustainability outlook for the past few years.
00:06:09 --> 00:06:12: And again, as Sheree mentioned, this is something we really
00:06:12 --> 00:06:13: try to be flexible with.
00:06:13 --> 00:06:16: We realized that folks weren't reading the big report.
00:06:16 --> 00:06:18: We shifted to the shorter form article.
00:06:19 --> 00:06:21: And then as Sheree mentioned too, we really want it
00:06:21 --> 00:06:24: to have a more holistic view of what was ahead
00:06:24 --> 00:06:25: in terms of sustainability.
00:06:25 --> 00:06:28: So added those extra folks from UI's big roster of
00:06:28 --> 00:06:31: sustainability experts so we could get a better picture and
00:06:31 --> 00:06:34: a more local, regional look on what folks are doing
00:06:34 --> 00:06:35: around sustainability.

00:06:36 --> 00:06:38: I'm going to go ahead and moderate the discussion in
00:06:38 --> 00:06:41: a few minutes here, but if we wanted to have
00:06:41 --> 00:06:44: our panelists quickly come on and say hello and just
00:06:44 --> 00:06:46: give a quick overview of where you come from and
00:06:46 --> 00:06:49: what you're doing, Jocelyn, you can get started.
00:06:50 --> 00:06:50: Great.
00:06:50 --> 00:06:51: Thanks, Kara.
00:06:51 --> 00:06:54: And I just want to say thanks to Uli for
00:06:54 --> 00:06:58: pulling us all together and also for the excellent report
00:06:58 --> 00:06:59: and article.
00:06:59 --> 00:07:00: If you haven't had a chance to take a look
00:07:00 --> 00:07:01: at it, I do recommend it.
00:07:01 --> 00:07:05: I learned a lot from the the insights from people
00:07:05 --> 00:07:06: from around the world.
00:07:07 --> 00:07:07: So thanks very much.
00:07:08 --> 00:07:09: My name is Jocelyn Hiddle.
00:07:09 --> 00:07:12: I'm the managing principal of the Denver Architecture Practice for
00:07:12 --> 00:07:15: HDR and previously was with Colorado State University.
00:07:15 --> 00:07:15: Thanks.
00:07:17 --> 00:07:18: Thanks, Jocelyn.
00:07:19 --> 00:07:19: Alessandra.
00:07:21 --> 00:07:22: Hi, everybody.
00:07:22 --> 00:07:24: I'm Alessandro calling in from Hong Kong just past midnight
00:07:25 --> 00:07:25: here.
00:07:25 --> 00:07:27: So I'm excited to be on the call with people
00:07:27 --> 00:07:28: in North America and Europe.
00:07:29 --> 00:07:31: I'm the President and Founder of B Incorporations.
00:07:31 --> 00:07:35: We're a sustainable engineering firm and also a software development
00:07:35 --> 00:07:36: firm.
00:07:36 --> 00:07:39: We launched a software that tracks building data and analytics
00:07:39 --> 00:07:41: and I'll be talking a little bit about AI.
00:07:41 --> 00:07:46: We have offices across Asia Pacific, Europe and North America.
00:07:46 --> 00:07:49: So today I'll be sharing our expertise on the APEC
00:07:49 --> 00:07:50: side.
00:07:51 --> 00:07:53: Thank you, Mina.
00:07:53 --> 00:07:54: Thank you, Kara.
00:07:55 --> 00:07:56: Good afternoon, good evening.
00:07:56 --> 00:07:57: Good morning everyone.
00:07:57 --> 00:08:00: Wherever you're dialing today and joining us, it's a really

00:08:01 --> 00:08:03: privileged to be a part of this event today with

00:08:03 --> 00:08:06: the Theseus teams panelists as well as ULI members.

00:08:06 --> 00:08:09: And so thank you so much for the ULI for

00:08:09 --> 00:08:11: reminding me to be a part of this conversation and

00:08:11 --> 00:08:15: congratulations on the wonderful report whose insights to really benefited

00:08:15 --> 00:08:16: me a lot as well.

00:08:17 --> 00:08:20: I'm this esteemed a director at Skidmore Arms and Merrill

00:08:20 --> 00:08:23: based in their London office and look at built environment

00:08:23 --> 00:08:26: projects and design projects all around the world from different

00:08:26 --> 00:08:30: scales of architecture, interior design, urban planning and the city

00:08:30 --> 00:08:30: scale.

00:08:30 --> 00:08:33: So I'll be bringing that expertise and experiences into the

00:08:33 --> 00:08:34: conversation today.

00:08:34 --> 00:08:35: So thank you.

00:08:37 --> 00:08:38: Thank you, Reeves.

00:08:39 --> 00:08:40: And again, Ditto.

00:08:40 --> 00:08:41: Thank you, Uli.

00:08:41 --> 00:08:42: Thank you colleagues.

00:08:42 --> 00:08:45: You know, this is a number of years have been

00:08:45 --> 00:08:46: engaged in this process.

00:08:47 --> 00:08:49: I think that's really to me the importance is kind

00:08:49 --> 00:08:53: of tracking the evolution of our industry's awareness and action

00:08:53 --> 00:08:53: impact.

00:08:54 --> 00:08:58: Reeves Taylor with Gensler, formerly the firm wide Director of

00:08:58 --> 00:09:03: Sustainability and Resilience, now focusing within the Research Institute on

00:09:03 --> 00:09:08: research around resilience, preparedness, well-being, global reach, largest architectural firm,

00:09:08 --> 00:09:12: projects range and scale, which I think will become obvious

00:09:12 --> 00:09:14: as we have a panel discussion.

00:09:14 --> 00:09:18: A big focus internationally too on learning from bringing that

00:09:18 --> 00:09:22: insight to a variety of practice areas and project types

00:09:22 --> 00:09:25: for really a global approach to this, which of course

00:09:25 --> 00:09:26: is Uli's Forte.

00:09:27 --> 00:09:28: Glad to be here and thanks everyone.

00:09:31 --> 00:09:31: Great.

00:09:31 --> 00:09:32: Thank you.

00:09:32 --> 00:09:33: Next slide.

00:09:33 --> 00:09:34: Great.

00:09:34 --> 00:09:35: Thank you, Shreya.

00:09:35 --> 00:09:40: So here is a quick overview of the top five

00:09:40 --> 00:09:44: sustainability issues that we tagged for 2026.

00:09:45 --> 00:09:47: We'll go over these 1 by 1 and in form

00:09:47 --> 00:09:51: of a moderated discussion and we'll have some audience participation

00:09:51 --> 00:09:53: and a few quizzes and ways for you all to

00:09:53 --> 00:09:55: interact with us as well.

00:09:55 --> 00:09:59: But quickly to overview this, number one, we want to

00:09:59 --> 00:10:03: recognize the financial risks of inaction and the business case

00:10:03 --> 00:10:09: for decarbonization #2 standardizing and integrating sustainability metrics into investment

00:10:09 --> 00:10:13: models, which is very much linked to #1 #3 shifting

00:10:13 --> 00:10:17: towards a whole life cycle and scalable decarbonization solutions.

00:10:17 --> 00:10:20: We talk about this on the daily at our Decarb

00:10:20 --> 00:10:21: team at ULI.

00:10:21 --> 00:10:22: How can we scale solutions?

00:10:22 --> 00:10:26: How can we have a bigger impact #4 As Alessandro

00:10:26 --> 00:10:30: mentioned, he'll be talking about the rise of artificial intelligence

00:10:30 --> 00:10:34: as both a sustainability tool and a resource challenge.

00:10:34 --> 00:10:37: We'll dig into that a little bit more and #5

00:10:37 --> 00:10:43: operationalizing physical resilience in response to escalating climate impacts.

00:10:43 --> 00:10:45: So before we jump into a one by one discussion,

00:10:45 --> 00:10:48: Shreya, if you can switch to the next slide.

00:10:48 --> 00:10:51: I wanted to bring up this image and Shreya will

00:10:51 --> 00:10:54: go ahead and link an article in the chat or

00:10:55 --> 00:10:57: Q&A for everyone participating.

00:10:57 --> 00:11:01: What we did this year, before we published our 2026

00:11:01 --> 00:11:06: Global Sustainability Outlook took a really close look at all

00:11:06 --> 00:11:08: the topics from the past years.

00:11:09 --> 00:11:10: We hadn't done this before.

00:11:10 --> 00:11:13: We figured with this, with this sort of fifth year

00:11:13 --> 00:11:16: stopping at 2025, we wanted to see what had changed.

00:11:17 --> 00:11:19: So our process had changed that we had mentioned in

00:11:19 --> 00:11:21: 2021 we had a lot of topics and we, we

00:11:21 --> 00:11:24: called that down to five topics starting in 2022, but

00:11:24 --> 00:11:27: we wanted to show how some of these topics we've

00:11:27 --> 00:11:29: been talking about for a while.

00:11:29 --> 00:11:33: So whether it's, you know, energy efficiency, general ESG

strategy

00:11:33 --> 00:11:37: or simplifying decarbonization, that has been a thread that's really

00:11:37 --> 00:11:41: pulled through the entirety of the global sustainability outlook.

00:11:41 --> 00:11:45: And then there's a few that haven't, we haven't really

00:11:45 --> 00:11:46: focused on as much.

00:11:46 --> 00:11:48: So you can see in 2021, we talked about water

00:11:48 --> 00:11:52: resources and we recognize that's a big topic, especially around

00:11:52 --> 00:11:55: AI, but it wasn't brought up in these conversations or

00:11:55 --> 00:11:59: roundtables, really indicative that it was something to look necessarily

00:11:59 --> 00:12:01: for in 2026 that we recognize it.

00:12:01 --> 00:12:04: And then another one you'll see that we talked about

00:12:04 --> 00:12:07: quite a bit and throughout the entire past five years

00:12:07 --> 00:12:11: is resilience, whether we called it resilience, climate risk, global

00:12:11 --> 00:12:14: flood challenges or any of the above that something that's

00:12:15 --> 00:12:16: really pulled through.

00:12:16 --> 00:12:19: And it's also interesting to see things that we talked

00:12:19 --> 00:12:22: about back in 2021, we talked about again in 2025

00:12:22 --> 00:12:24: and we'll continue to talk about in 2026.

00:12:24 --> 00:12:26: So I do encourage you to take a look at

00:12:26 --> 00:12:29: this, this sort of pre read article to the Global

00:12:29 --> 00:12:33: Sustainability Outlook 2026 to see how things have changed and

00:12:33 --> 00:12:36: how some things we're still talking about with the same

00:12:36 --> 00:12:38: lens as we were a few years ago.

00:12:38 --> 00:12:39: And next slide, please?

00:12:48 --> 00:12:49: OK.

00:12:49 --> 00:12:51: So we're going to hop into the discussion.

00:12:51 --> 00:12:54: And as I said, we have number one topic.

00:12:54 --> 00:12:56: Now this isn't number one out of the five.

00:12:56 --> 00:12:58: These are these are not in any particular order.

00:12:58 --> 00:13:00: We pulled these 5 topics out just to make clear

00:13:00 --> 00:13:01: that these are not ranked.

00:13:01 --> 00:13:03: But the first one we're going to talk about is

00:13:03 --> 00:13:06: the growing recognition of financial risks of inaction and the

00:13:06 --> 00:13:08: business case for decarbonization.

00:13:08 --> 00:13:11: So we have a quote from for Mark, one of

00:13:11 --> 00:13:14: our our great global sustainability outlook participants over the years

00:13:14 --> 00:13:18: saying that there's there's movement by the industry to consider

00:13:18 --> 00:13:21: how sustainability impacts the bottom line, how it can enhance

00:13:21 --> 00:13:26: risk management, increase operational efficiency, improve innovation and lower the

00:13:26 --> 00:13:26: discount rate.

00:13:26 --> 00:13:29: I mean, that sounds like a great plan for me.

00:13:29 --> 00:13:32: But there there's some more more intricate ease of that

00:13:32 --> 00:13:33: that we need to talk about.

00:13:33 --> 00:13:36: It's not just as easy as putting it all on

00:13:36 --> 00:13:36: paper.

00:13:37 --> 00:13:39: So Reeves, do you want to talk a little bit

00:13:39 --> 00:13:42: more about the risk and financial cost of inaction from

00:13:42 --> 00:13:44: a resilience perspective?

00:13:44 --> 00:13:45: Yes, terrific.

00:13:45 --> 00:13:47: Thank you, Kira that I think it's kind of the

00:13:47 --> 00:13:51: triple bottom line that we've talked about, you know, economy,

00:13:51 --> 00:13:54: ecology and equity or, you know, the human being side,

00:13:54 --> 00:13:57: you know, whether it's a client who's looking at recruiting

00:13:57 --> 00:14:01: and retention or looking at their investors or looking at

00:14:01 --> 00:14:03: insurability, this troika of resilience.

00:14:03 --> 00:14:06: But behind that resource stewardship, this is the idea of

00:14:06 --> 00:14:07: using less energy.

00:14:07 --> 00:14:12: Decarbonizing is a given in large corporations and many public

00:14:12 --> 00:14:13: agencies.

00:14:13 --> 00:14:14: It's partnered with resilience.

00:14:14 --> 00:14:16: You can't ignore the two.

00:14:16 --> 00:14:18: And we think in the future, there's even the build

00:14:18 --> 00:14:21: back regeneration, there's the expectation of cleaning up the mess

00:14:21 --> 00:14:22: and making a better place.

00:14:22 --> 00:14:25: And those 3 components are kind of the given as

00:14:25 --> 00:14:29: we look at whether you're, you know, sovereign investors, the

00:14:29 --> 00:14:32: reality of long term value to recruiting amazing people.

00:14:32 --> 00:14:35: Many of our corporate, every client say, you know, we're

00:14:35 --> 00:14:38: recruiting the current kindergarteners in, you know, 20 years.

00:14:38 --> 00:14:40: We need to build for the future.

00:14:40 --> 00:14:43: And really this risk of not addressing the the challenge

00:14:43 --> 00:14:47: coming from weather, climate or other, you know, inabilities to

00:14:47 --> 00:14:50: prepare or future proof, we see as a driver for

00:14:50 --> 00:14:53: design, construct and operate in a better way.

00:14:53 --> 00:14:56: So and add to that the insurability which the ULI
00:14:56 --> 00:14:59: has done some great seminars on in terms of that
00:14:59 --> 00:15:01: conversation of risk mitigation.
00:15:01 --> 00:15:04: It's all very valuable at the inception and our process
00:15:04 --> 00:15:07: and many of my colleagues in design and delivery.
00:15:09 --> 00:15:09: Great.
00:15:09 --> 00:15:12: I mean, I really like just your, your simple statement
00:15:12 --> 00:15:13: of building for the future.
00:15:13 --> 00:15:15: We can't just build for today.
00:15:15 --> 00:15:17: We need to look ahead and make sure that we're
00:15:17 --> 00:15:21: we're incorporating financial risks of an action today for tomorrow.
00:15:22 --> 00:15:24: Nina, what about the the the EU perspective?
00:15:24 --> 00:15:28: What's your insight on financial risks and the business case
00:15:28 --> 00:15:29: for decarbonization?
00:15:30 --> 00:15:31: Sure.
00:15:31 --> 00:15:33: I think in the European context this is almost even
00:15:33 --> 00:15:36: more prevalent and evident because it's very much sort of
00:15:36 --> 00:15:39: decarbonization is no longer just values driven, but it's like
00:15:39 --> 00:15:41: risk driven and regulation backed.
00:15:41 --> 00:15:46: The EU taxonomy talks about this corporate sustainability reporting directive
00:15:46 --> 00:15:50: really emphasizes and tightening the capital requirements over the years.
00:15:50 --> 00:15:53: Over the more recent years that we have seen have
00:15:53 --> 00:15:57: fundamentally really reframed carbon as a financial liability and as
00:15:58 --> 00:16:01: assets that fail to decarbonize, it's becoming evident that they
00:16:01 --> 00:16:04: face higher cost of capital in the long run.
00:16:04 --> 00:16:08: It may be that there are shorter term capital savings
00:16:08 --> 00:16:12: for not for delivering non decarbonize or net 0 ready
00:16:12 --> 00:16:13: assets.
00:16:13 --> 00:16:16: But in the long run they're actually already seeing the
00:16:16 --> 00:16:20: the harm or the challenges that are being faced as
00:16:20 --> 00:16:23: the as the project becomes utilized and becomes an asset
00:16:23 --> 00:16:25: of value consideration.
00:16:25 --> 00:16:29: And what we're also seeing that early decarbonization therefore is
00:16:29 --> 00:16:32: not a value protection strategy only, but it's, it's sorry,
00:16:32 --> 00:16:36: it's a value protection strategy and not a premium add
00:16:36 --> 00:16:39: on, even though there may be some initial CapEx involved
00:16:39 --> 00:16:41: in the investments that is needed upfront.

00:16:42 --> 00:16:45: But we believe that there is and it's evidence always
00:16:45 --> 00:16:49: becoming more evident that it's becoming a much more longer
00:16:49 --> 00:16:50: term effective strategy.
00:16:50 --> 00:16:54: And maybe just to iterate and I'm speaking not from
00:16:54 --> 00:16:55: a finance perspective.
00:16:55 --> 00:16:57: I'm not a finance expert or in any way.
00:16:57 --> 00:17:00: But as designer says, what we have observed with the
00:17:00 --> 00:17:03: clients that we work with from around the world, but
00:17:03 --> 00:17:06: especially in Europe as SOM and as designers, I think
00:17:06 --> 00:17:09: we play a very critical role in the risking assets
00:17:09 --> 00:17:13: at source, translating these regulatory and financial signals into spatial,
00:17:13 --> 00:17:16: structural and systems decisions that we can help make informed
00:17:16 --> 00:17:20: decisions for our clients or for investors that really lock
00:17:20 --> 00:17:23: in lower carbon and lower exposure over the building's life
00:17:23 --> 00:17:23: cycle.
00:17:23 --> 00:17:27: And the earlier we engage in those conversations and the
00:17:27 --> 00:17:32: earlier we can iteratively help inform decisions with analysis, the
00:17:32 --> 00:17:35: longer the assets lifespan is going to be and also
00:17:35 --> 00:17:38: the longer the liability of the risk is going to
00:17:38 --> 00:17:39: be reduced.
00:17:41 --> 00:17:41: Great, thank you.
00:17:41 --> 00:17:43: And I really like, you know, y'all are giving us
00:17:43 --> 00:17:45: some great quotes for next year too.
00:17:45 --> 00:17:48: Risk driven regulation backed is is really key and important
00:17:48 --> 00:17:50: and and a little bit of a difference than I
00:17:50 --> 00:17:52: think we see, you know globally or at least in
00:17:52 --> 00:17:52: the Americas.
00:17:52 --> 00:17:55: And then I'm really focusing on on early decarb, you
00:17:55 --> 00:17:58: know, mentioning that early decarb is, is key.
00:17:58 --> 00:18:00: And that's something that we saw kind of as as
00:18:00 --> 00:18:03: a thread that we've pulled through global sustainability outlook through
00:18:04 --> 00:18:06: the years that we're still really focusing on getting it
00:18:06 --> 00:18:09: right in the beginning and getting it integrated into the
00:18:09 --> 00:18:10: beginning of every process.
00:18:10 --> 00:18:12: So that's still very much a big, a big hole
00:18:12 --> 00:18:14: to fill, I think across the industry.
00:18:15 --> 00:18:20: Jocelyn, any insights on on higher education projects or any
00:18:20 --> 00:18:24: any changes over the the past few years in U.S.

00:18:24 --> 00:18:25: Federal funding?

00:18:26 --> 00:18:27: Terry, yes, thanks.

00:18:27 --> 00:18:30: I'll build a little on the excellent points that Reeves

00:18:30 --> 00:18:31: and Mina have already made.

00:18:32 --> 00:18:35: HDR, as you may know is a large global architecture

00:18:35 --> 00:18:40: and engineering firm and we have clients that really span

00:18:40 --> 00:18:45: the built environment from transportation to water, federal projects, utilities,

00:18:45 --> 00:18:47: higher Ed, civic projects.

00:18:48 --> 00:18:51: We really do work that that spans all aspects of

00:18:51 --> 00:18:52: the built environment.

00:18:52 --> 00:18:55: But I'll zoom in a little on higher Ed and

00:18:56 --> 00:18:59: federal projects as an example of some of what Reeves

00:19:00 --> 00:19:03: and me have already hit on, which is we're seeing

00:19:03 --> 00:19:07: so much uncertainty in the past year, 18 months around

00:19:07 --> 00:19:08: funding sources.

00:19:08 --> 00:19:12: So one of the things that we are are seeing

00:19:12 --> 00:19:16: our higher Ed partners and our federal partners thinking about

00:19:17 --> 00:19:22: is how we can you think about decarbonization sustainability strategies

00:19:22 --> 00:19:25: really more from the business side.

00:19:25 --> 00:19:29: How can we think about decarbonization strategies that save money,

00:19:29 --> 00:19:32: reduce risk and and reduce cost variability?

00:19:32 --> 00:19:36: Particularly important obviously for higher Ed and, and other institutional

00:19:36 --> 00:19:39: partners who hold these real estate assets for a long

00:19:39 --> 00:19:42: time or manage these infrastructure projects for a very long

00:19:42 --> 00:19:43: time.

00:19:44 --> 00:19:48: The return on that investment, that life cycle assessment is,

00:19:48 --> 00:19:52: is always been important, but is even more important when

00:19:52 --> 00:19:57: we're thinking about a risky, uncertain funding environment where things

00:19:57 --> 00:19:59: like saving time, reducing cost.

00:20:00 --> 00:20:04: Decreasing life cycle cost is really important and much more

00:20:04 --> 00:20:07: of an argument that we make to make the case

00:20:07 --> 00:20:12: for decarbonization sustainability, which we we may have led with

00:20:12 --> 00:20:15: in the past and now is potentially a a stronger

00:20:15 --> 00:20:20: Co benefit argument when paired with the opportunity to de

00:20:20 --> 00:20:23: risk the the cost and and schedule of of a

00:20:23 --> 00:20:24: large scale project.

00:20:25 --> 00:20:28: So things like for example, mass timber, which is an

00:20:28 --> 00:20:32: area where HDR is a leader, really can reduce schedule
00:20:32 --> 00:20:32: risk.
00:20:32 --> 00:20:36: So in addition to being a great decarbonization strategy and
00:20:36 --> 00:20:40: the carbon sequestration strategy, it also can speed up a
00:20:40 --> 00:20:43: project and reduce risk in the West.
00:20:43 --> 00:20:46: It also can offer a chance for local sourcing, which
00:20:46 --> 00:20:50: also can reduce risk and schedule, schedule risk and cost
00:20:50 --> 00:20:53: for a lot of our higher Ed and federal partners
00:20:53 --> 00:20:53: as well.
00:20:54 --> 00:20:56: A lot of where their attention is turning is not
00:20:56 --> 00:21:00: to new builds, but to retrofits and renovations, which have
00:21:00 --> 00:21:03: huge carbon reduction potential, but also our lower cost and
00:21:03 --> 00:21:07: allow them to think about future proofing their existing assets
00:21:07 --> 00:21:08: for change as it comes.
00:21:10 --> 00:21:12: And as I mentioned that life cycle cost is always
00:21:12 --> 00:21:15: really important, but it's, it's really much more what we
00:21:15 --> 00:21:15: lead lead with now.
00:21:15 --> 00:21:18: I I do believe that people still care very much
00:21:18 --> 00:21:22: about decarbonization, but these conversations around cost and reducing risk
00:21:22 --> 00:21:25: are a lot of how we can successfully frame the
00:21:25 --> 00:21:27: argument in uncertain times.
00:21:28 --> 00:21:28: Absolutely.
00:21:28 --> 00:21:29: I mean, that's a great point too.
00:21:29 --> 00:21:32: You know, really focusing on the business case for decarbonization.
00:21:32 --> 00:21:36: And yes, I agree, I think people still care about
00:21:36 --> 00:21:40: it, but speaking the right language and really showing the
00:21:40 --> 00:21:44: success or the data and how it can be, you
00:21:44 --> 00:21:48: know, a good investment outside of just wanting to do
00:21:48 --> 00:21:49: it is huge.
00:21:49 --> 00:21:49: It's key.
00:21:49 --> 00:21:51: And I really like your point too about projects with
00:21:51 --> 00:21:53: a long, long hold being different.
00:21:53 --> 00:21:55: And you know, at least in our D Carp team,
00:21:55 --> 00:21:58: we really focus on on tenants and tenant engagement.
00:21:58 --> 00:22:00: So when you have a longer hold on a, on
00:22:00 --> 00:22:03: a particular building or infrastructure, a lot of times thinking
00:22:03 --> 00:22:05: about that the folks that are coming in and out
00:22:05 --> 00:22:05: are, is very key to.
00:22:06 --> 00:22:07: Well, thanks all.
00:22:07 --> 00:22:09: I'm going to move on to the next slide here,

00:22:09 --> 00:22:10: number 2.

00:22:10 --> 00:22:13: And for all our participants, we'll, we'll be tagging you

00:22:13 --> 00:22:15: with some engagement in a second.

00:22:15 --> 00:22:20: But let's talk about #2 standardizing and integrating sustainability into

00:22:20 --> 00:22:21: investment models.

00:22:22 --> 00:22:25: As Sylvester Wong mentioned, private lenders are flying the flag

00:22:25 --> 00:22:29: for sustainability, but need more robust and standardized methodologies for

00:22:29 --> 00:22:30: their underwriting criteria.

00:22:30 --> 00:22:33: So this links very closely to what we were just

00:22:33 --> 00:22:33: talking about.

00:22:34 --> 00:22:36: But Reeves, do you want to kick us off here

00:22:36 --> 00:22:39: and give us some on to investment models and sustainability?

00:22:39 --> 00:22:42: Well, I'm going to say I'll leverage like Jocelyn did

00:22:42 --> 00:22:45: you know, we're architects, so we have to understand our

00:22:45 --> 00:22:46: clients and their business models.

00:22:47 --> 00:22:50: I've had the pleasure of working with a colleague at

00:22:50 --> 00:22:54: Morningstar where they've really given an insight into underwriting around

00:22:54 --> 00:22:57: not only the the climate and weather challenges, but also

00:22:57 --> 00:23:00: just the uncertainty of, well, resources.

00:23:00 --> 00:23:03: I mean, in Texas, we're with our weather facing us,

00:23:03 --> 00:23:07: we're rejuvenating the conversation of, you know, the grid.

00:23:07 --> 00:23:08: Is the grid predictable?

00:23:09 --> 00:23:11: Can we rely on it?

00:23:11 --> 00:23:14: And so when you're looking at sustainability, you know, as

00:23:14 --> 00:23:17: definitely leveraging on Mina and Jocelyn's insight, the idea of

00:23:17 --> 00:23:21: having, you know, something that business interruption, you don't worry

00:23:21 --> 00:23:22: about that's going to be there.

00:23:22 --> 00:23:25: It's going to be a resource for the community.

00:23:26 --> 00:23:27: Business keeps operating.

00:23:28 --> 00:23:32: You know, this idea of sustainability, resource stewardship, perhaps the

00:23:32 --> 00:23:36: resilience to keep the business operating is just good business.

00:23:36 --> 00:23:38: I mean, you know, in Texas years ago with major

00:23:38 --> 00:23:41: hurricanes, if we're not in business for five days, as

00:23:41 --> 00:23:45: our investors have pointed up, people go out of business.

00:23:45 --> 00:23:47: And if they go out of business, people, you know,

00:23:47 --> 00:23:49: the community loses that economic engine.

00:23:49 --> 00:23:53: And so the idea of particularly water, energy and human

00:23:53 --> 00:23:56: resources being challenged is, you know, sustainability one O 1,

00:23:56 --> 00:24:00: you know, the quality work environment, a safe environment goes

00:24:00 --> 00:24:04: without saying, but it's the resource use, whether it's our,

00:24:04 --> 00:24:07: you know, very large mission critical, IE computer facility work

00:24:07 --> 00:24:09: or just your office space.

00:24:09 --> 00:24:13: And, you know, the investment with my colleague at Morning

00:24:13 --> 00:24:16: Stars, you know, they're now factoring in not only the

00:24:16 --> 00:24:19: challenges that come from climate, but how one manages the

00:24:19 --> 00:24:23: entire portfolio around the stewardship of resources, both because the

00:24:23 --> 00:24:27: bottom line, energy costs are going up, but more particularly

00:24:27 --> 00:24:30: now speaking as a designer, you know, we have a

00:24:30 --> 00:24:33: facility or series of facilities portfolios, as Jocelyn was noting

00:24:33 --> 00:24:36: relative to higher Ed that, you know, we can't count

00:24:36 --> 00:24:38: on to be fully in action.

00:24:38 --> 00:24:40: I mean the investment is not bearing its full fruit.

00:24:41 --> 00:24:44: The other real quick aspect of when we talk about

00:24:44 --> 00:24:46: these models is it's a changing model system.

00:24:47 --> 00:24:49: And so it's tough for us as designers to say

00:24:49 --> 00:24:51: So what do you value, you know, every project we

00:24:52 --> 00:24:55: really need to understand their risks and what they want

00:24:55 --> 00:24:58: to design toward what resources their, you know, investors and

00:24:58 --> 00:25:01: their board are expecting you to be smart about human,

00:25:01 --> 00:25:03: you know, well-being being in a a given in many

00:25:03 --> 00:25:06: of our projects, indoor air quality, etcetera.

00:25:06 --> 00:25:10: So the standardization is kind of a requirement that the

00:25:10 --> 00:25:15: yeah, real estate investment, the commercial real estate investment world

00:25:15 --> 00:25:18: is expecting and we as designers have to respond to

00:25:18 --> 00:25:22: it because kind of the foundation of that portfolio or

00:25:22 --> 00:25:26: the individual building or campus is really fundamental on a

00:25:26 --> 00:25:28: clear and back to measurable performance.

00:25:28 --> 00:25:31: The whole idea of, you know, basic design is out

00:25:31 --> 00:25:34: the window, you know, 4 walls and a roof that

00:25:34 --> 00:25:35: don't leak.

00:25:35 --> 00:25:37: Now it's measurable impact.

00:25:37 --> 00:25:42: Now it's key performance indicators that we establish and

through
00:25:42 --> 00:25:45: design, construct and operate The owner.
00:25:45 --> 00:25:47: The user needs to show that this thing is a
00:25:47 --> 00:25:48: good investment.
00:25:51 --> 00:25:51: Absolutely.
00:25:51 --> 00:25:52: No.
00:25:52 --> 00:25:53: I really appreciate that.
00:25:53 --> 00:25:55: Alessandro, we haven't heard from you yet.
00:25:55 --> 00:25:57: Do you want to talk a little bit about how
00:25:57 --> 00:25:59: green building certifications fit into this picture?
00:26:00 --> 00:26:01: Yeah, absolutely.
00:26:01 --> 00:26:02: I think so.
00:26:02 --> 00:26:06: As far as APEC goes and investment models, almost all
00:26:06 --> 00:26:10: developers are using rebuilding rating systems to underline the the
00:26:10 --> 00:26:14: financial value of of the investments that they're making, whether
00:26:14 --> 00:26:17: it's a new build or whether it's a retrofit.
00:26:17 --> 00:26:22: And in Mainland China, we had quite a major milestone
00:26:22 --> 00:26:26: in June of this year because China hit 10,000 lead
00:26:26 --> 00:26:30: projects after being 20 years in the sector.
00:26:30 --> 00:26:33: So that was that was quite an achievement.
00:26:34 --> 00:26:38: The 2025 figures haven't been released yet by US GB
00:26:38 --> 00:26:43: C, but in 24/20/24, there were over 3000 certifications, over
00:26:43 --> 00:26:48: 63,000,000 square feet of registered and certified lead building space.
00:26:48 --> 00:26:52: And China is #1 globally outside of North America, and
00:26:52 --> 00:26:55: this represents A broader APEC adoption.
00:26:55 --> 00:26:58: So 51% of all office space in APEC has a
00:26:58 --> 00:27:02: green building certification, and it's going up 6 1/2% year
00:27:02 --> 00:27:03: on year.
00:27:03 --> 00:27:07: And across the board, we see green rental premiums that
00:27:07 --> 00:27:08: average 4%.
00:27:08 --> 00:27:13: Lead is the the predominant certification system, but not in
00:27:13 --> 00:27:15: every country.
00:27:15 --> 00:27:19: Australia Green Star is really dominant to 2024 being the
00:27:19 --> 00:27:20: largest year.
00:27:21 --> 00:27:25: Singapore has BCA green mark that is now demanding a
00:27:25 --> 00:27:30: 12% rental premium compared to non certified offices.
00:27:30 --> 00:27:34: And then we have emerging markets like India that has
00:27:34 --> 00:27:39: two certification systems, one from the government called GRIHA and
00:27:39 --> 00:27:43: one that's industry LED called IGBC that only has a

00:27:43 --> 00:27:48: 5% market penetration, but a tremendous opportunity for growth coming

00:27:48 --> 00:27:49: into this year.

00:27:49 --> 00:27:52: In June of this year, lead version 5 is going

00:27:53 --> 00:27:57: to become mandatory and we're expecting a huge surge in

00:27:57 --> 00:28:02: project registrations globally predominantly because there's only been a one

00:28:03 --> 00:28:06: year transition period between V4 and V5.

00:28:06 --> 00:28:10: And this is very similar to what happened between V3

00:28:10 --> 00:28:13: and V2 where there was a 300% surge in project

00:28:14 --> 00:28:18: registrations, while from V3 to V4 there was a three-year

00:28:18 --> 00:28:18: overlap.

00:28:19 --> 00:28:22: So we can expect that huge surge to happen.

00:28:22 --> 00:28:26: So in here, in this part of the world, definitely

00:28:26 --> 00:28:29: green building has become standard practice.

00:28:29 --> 00:28:33: However, for Grade A now developers are looking at what

00:28:33 --> 00:28:37: is next, what can what, how can we diversify ourselves

00:28:37 --> 00:28:40: and, and this is where the trends now come in.

00:28:41 --> 00:28:43: Yeah, I mean, it really sounds like there's a lot

00:28:43 --> 00:28:45: of options globally for folks to to get on board

00:28:45 --> 00:28:48: with and figure out different rating systems or different, you

00:28:48 --> 00:28:49: know, methodologies.

00:28:49 --> 00:28:52: But really, there's still a lot of work to be

00:28:52 --> 00:28:55: done to make sure we're all measuring sustainability, you know,

00:28:56 --> 00:28:58: efficiency and all of the above in in the same

00:28:58 --> 00:28:58: way.

00:28:59 --> 00:29:02: I'm gonna move ahead now to topic #3 and we

00:29:02 --> 00:29:05: will have some interaction for the folks on the call

00:29:06 --> 00:29:07: in a few minutes here.

00:29:07 --> 00:29:11: So get your keyboards and your cell phones ready #3

00:29:11 --> 00:29:16: is a shift towards whole life cycle and scalable decarbonization

00:29:16 --> 00:29:17: solutions.

00:29:18 --> 00:29:19: Reeves, here's a quote from you.

00:29:19 --> 00:29:22: There's not a single one of our top 100 clients

00:29:22 --> 00:29:26: that isn't still talking about resource stewardship, resilience and regeneration,

00:29:26 --> 00:29:29: particularly as it relates to doing better for community.

00:29:29 --> 00:29:30: So we we'd love to hear it.

00:29:30 --> 00:29:33: And if we move to the next slide, we're going

00:29:33 --> 00:29:36: to have y'all interact a little bit and share with

00:29:36 --> 00:29:39: us either via that QR code in the upper left

00:29:39 --> 00:29:42: corner via your cell phone, or you can join slido.com
00:29:42 --> 00:29:45: and plug in those numbers and let us know which
00:29:45 --> 00:29:49: approach do you see as having the greatest potential to
00:29:49 --> 00:29:52: reduce whole life cycle carbon at scale over the next
00:29:52 --> 00:29:53: decade.
00:29:53 --> 00:29:54: That's a lot of things to think about, but we
00:29:54 --> 00:29:55: would love to hear from you.
00:29:56 --> 00:29:59: So you can go ahead and join and start answering
00:29:59 --> 00:30:02: and we'll give you all just a minute or so
00:30:02 --> 00:30:05: and we'll see that the live updates as they happen
00:30:05 --> 00:30:08: and to the panel, feel free to come off you
00:30:08 --> 00:30:12: and you can react to these numbers that we're seeing
00:30:12 --> 00:30:13: live in front of us.
00:30:14 --> 00:30:16: I mean, actually we can start chatting, you know, while
00:30:16 --> 00:30:18: these numbers are, are are moving around here.
00:30:18 --> 00:30:20: Meena, do you want to talk a little bit more
00:30:20 --> 00:30:23: about whole life cycle and scalable decarbonization?
00:30:23 --> 00:30:24: Of course, happy to.
00:30:24 --> 00:30:26: And it's, it's great to see.
00:30:26 --> 00:30:28: I think the results already coming in, it's very much
00:30:28 --> 00:30:30: in line to what I'm going to emphasize perhaps.
00:30:30 --> 00:30:33: But I think maybe I should just start saying that
00:30:33 --> 00:30:36: whole life carbon is really, really ambitious meets reality and
00:30:36 --> 00:30:38: where we really can leverage metrics and data to make
00:30:38 --> 00:30:40: truly longer term informed decisions.
00:30:40 --> 00:30:43: And I think that's why it's important to look at
00:30:43 --> 00:30:46: sort of whole life carbon impact of any built assets
00:30:46 --> 00:30:49: from the component, from material to component level and to
00:30:49 --> 00:30:50: the system level.
00:30:51 --> 00:30:53: And not only look at that one asset in isolation.
00:30:53 --> 00:30:56: Even though our scope of influence maybe immediately because our
00:30:56 --> 00:30:59: scope of work is perhaps limited to 1 building or
00:30:59 --> 00:31:01: one asset that we may be working on, but its
00:31:01 --> 00:31:05: relationship with the surrounding assets and surrounding buildings and also
00:31:05 --> 00:31:07: the, if not the larger city ecosystem.
00:31:07 --> 00:31:09: And I'm mindful when I say that I'm setting a
00:31:09 --> 00:31:13: big ambition here, but it's really always very critical, I
00:31:13 --> 00:31:15: think to be for us to be mindful of understanding
00:31:15 --> 00:31:18: the impact of our decisions on one building that has
00:31:18 --> 00:31:20: on on the, on that local market, on that local

00:31:21 --> 00:31:21: city and so forth.
00:31:22 --> 00:31:25: Because we're hopefully in every project that we're working on
00:31:25 --> 00:31:27: collectively, wherever we may be around the world.
00:31:27 --> 00:31:30: And I speak as a designer, environmental engineer, but any
00:31:30 --> 00:31:33: project we're working on, I see that as an opportunity
00:31:33 --> 00:31:36: to set a precedent for others to follow and an
00:31:36 --> 00:31:39: example even in terms of failures and successes to be
00:31:39 --> 00:31:40: able to share it.
00:31:40 --> 00:31:43: And so at so when we very much are built
00:31:43 --> 00:31:46: in that mindset and we treat every project almost as
00:31:46 --> 00:31:50: an opportunity to make an incremental improvement and innovate as
00:31:50 --> 00:31:53: possible as much as possible to reduce the whole life
00:31:53 --> 00:31:55: carbon impact of any asset.
00:31:55 --> 00:31:58: And that's why we've created sort of this framework, very
00:31:58 --> 00:32:02: rigorous framework over the last few years around whole life
00:32:02 --> 00:32:05: carbon design and accounting so that we can measure the
00:32:05 --> 00:32:07: impact of every aspect of any build asset in the
00:32:07 --> 00:32:08: long run.
00:32:08 --> 00:32:11: And maybe I should also talk about, I mentioned the
00:32:11 --> 00:32:15: importance of, of scalability of the positive impact we may
00:32:15 --> 00:32:18: be creating because I think one or a handful of
00:32:18 --> 00:32:21: amazing buildings or projects is not going to be enough
00:32:21 --> 00:32:24: to sort of to tip the scale and for the
00:32:24 --> 00:32:25: industry to leapfrog.
00:32:25 --> 00:32:28: And I think for that reason, we talked about standardization
00:32:28 --> 00:32:32: in the previous questions and point of conversation, but it's
00:32:32 --> 00:32:36: really important that we follow standardized metrics and systems and
00:32:36 --> 00:32:39: evaluation methods to be able to really understand the true
00:32:39 --> 00:32:41: impact of the global industry and sector.
00:32:42 --> 00:32:45: And, and there are many examples emerging mores around the
00:32:45 --> 00:32:46: world.
00:32:46 --> 00:32:49: And one maybe I can reference and I'll stop here
00:32:49 --> 00:32:51: for, for others to make a comment around.
00:32:51 --> 00:32:54: But we've been very heavily involved, as I saw on
00:32:54 --> 00:32:56: with the UK with the world's first net 0 carbon
00:32:56 --> 00:32:59: building standard, which is, which was launched in the UK
00:32:59 --> 00:33:00: almost two years ago.
00:33:00 --> 00:33:03: And that really is trying to establish what good looks
00:33:03 --> 00:33:07: like in 19 different sectors and building typologies from a

00:33:07 --> 00:33:08: whole life carbon perspective.

00:33:08 --> 00:33:11: And I think we need more of those standards and

00:33:11 --> 00:33:14: examples in various regions and countries around the world to

00:33:14 --> 00:33:16: really be able to establish what good looks like so

00:33:16 --> 00:33:19: we can truly measure the impact of the decisions that

00:33:19 --> 00:33:21: we're making for the long term.

00:33:22 --> 00:33:23: Fantastic.

00:33:23 --> 00:33:24: Thank you.

00:33:24 --> 00:33:26: And just I mean a quick minute here to look

00:33:26 --> 00:33:27: at the responses here.

00:33:27 --> 00:33:30: Adaptive reuse blew the rest of the topics out of

00:33:30 --> 00:33:33: the water, which honestly I was not expecting.

00:33:33 --> 00:33:35: I was, I was thinking it was going to be

00:33:35 --> 00:33:38: a little bit more even see a little bit more

00:33:38 --> 00:33:39: district energy systems.

00:33:40 --> 00:33:42: Anyone else on the panel want to respond to that?

00:33:43 --> 00:33:45: You know, Alessandro Jocelyn?

00:33:45 --> 00:33:45: Yeah.

00:33:45 --> 00:33:48: I mean, I so from, if coming from an APAR

00:33:48 --> 00:33:52: perspective for us adaptive reuse is very difficult because we're

00:33:52 --> 00:33:56: predominantly still building new except for in developed markets like

00:33:56 --> 00:33:58: maybe Australia and Japan.

00:33:58 --> 00:34:00: So I'm not, I'm not surprised to see it.

00:34:00 --> 00:34:04: I think at scale for our part of the world,

00:34:04 --> 00:34:09: it's really focusing on life cycle assessment and and low

00:34:09 --> 00:34:10: carbon materials.

00:34:11 --> 00:34:13: And to to the point that Mina was making, it

00:34:13 --> 00:34:15: really is about standardization.

00:34:15 --> 00:34:19: And that's where we've definitely leapfrog in this part of

00:34:19 --> 00:34:22: the world last year and coming into this year with

00:34:22 --> 00:34:26: databases that are now available, expanding APAC specific data sets

00:34:27 --> 00:34:31: to account for regional electricity grades, transfer distances and local

00:34:31 --> 00:34:33: manufacturing processes.

00:34:33 --> 00:34:37: Because prior to that, we're just using industry default values

00:34:37 --> 00:34:40: and there's quite a lot of inaccuracy in that.

00:34:41 --> 00:34:44: So just to name a few, we have China's National

00:34:44 --> 00:34:50: Greenhouse Gas Emission Factor database, Australia's Neighbor's Embodied Carbon Tool,

00:34:50 --> 00:34:54: Japan has AJ CAT carbon assessment Tool, and in Singapore,

00:34:54 --> 00:34:56: we have the Embodied Carbon Pathfinder.

00:34:57 --> 00:35:01: And all of those are accelerating the adoption across the

00:35:01 --> 00:35:02: board.

00:35:02 --> 00:35:08: In fact, Australasia accounted for 30% of global EPD publication

00:35:08 --> 00:35:13: at the single largest regional contributor worldwide with a lot

00:35:13 --> 00:35:18: of potential adoption in India and in Southeast Asia.

00:35:19 --> 00:35:22: The other trend that I see coming this year is

00:35:22 --> 00:35:27: LEAD version 5 has made life cycle assessment mandatory as

00:35:27 --> 00:35:31: part of the kind of the Cradle to Gates classification,

00:35:31 --> 00:35:36: but with one critical limitation that there is no performance

00:35:36 --> 00:35:38: assessment in Lead version 5.

00:35:38 --> 00:35:41: So it just gives you credit and you have to

00:35:41 --> 00:35:41: do it.

00:35:41 --> 00:35:44: Actually, it's mandatory to do it, but it doesn't benchmark

00:35:44 --> 00:35:46: you and it doesn't give you a point.

00:35:46 --> 00:35:51: So there are other systems, namely one that's come out

00:35:51 --> 00:35:55: of China, but is now a global system called RESET

00:35:55 --> 00:36:00: and they have an embodied carbon certification that benchmarks your

00:36:00 --> 00:36:02: project to your peers.

00:36:02 --> 00:36:06: So specifically to use types and and typology.

00:36:06 --> 00:36:08: So the convergence of all of those, I think we

00:36:08 --> 00:36:11: have quite a bright future in terms of LCA across

00:36:11 --> 00:36:12: APEC.

00:36:13 --> 00:36:14: Absolutely.

00:36:15 --> 00:36:17: Let's see Reeves or Jocelyn Any.

00:36:17 --> 00:36:19: Yep, just real quick.

00:36:19 --> 00:36:19: Yeah, I think.

00:36:19 --> 00:36:23: I think you've got kind of three or four major

00:36:23 --> 00:36:26: global design firms who in their own way are doing

00:36:26 --> 00:36:27: amazing things.

00:36:27 --> 00:36:30: And that's that kind of leadership in the design world.

00:36:30 --> 00:36:31: This really made a difference.

00:36:31 --> 00:36:34: For instance, you know, seven years ago or so, our

00:36:34 --> 00:36:38: leaders created the Gensler City's Climate Challenge where we, you

00:36:38 --> 00:36:42: know, publicly said, having been at the Paris climate accord

00:36:42 --> 00:36:43: in 2015, we need to take steps.

00:36:44 --> 00:36:45: We need to make a change.

00:36:45 --> 00:36:46: And we advertised it.
00:36:46 --> 00:36:48: We said this is our change from what we're doing
00:36:48 --> 00:36:51: with our, you know, measuring the energy use intensity.
00:36:51 --> 00:36:54: That's the carbon of OPS to the, you know, everybody's
00:36:54 --> 00:36:56: talking now, embodied carbon.
00:36:56 --> 00:36:59: We released the GPS 1.0 and 2.0, which is how
00:36:59 --> 00:37:03: we specify our materials on every project, you know ??8000
00:37:03 --> 00:37:07: projects a year, 1.4 some odd billion square feet.
00:37:07 --> 00:37:10: You Add all the teams on this call, we're we're
00:37:10 --> 00:37:13: delivering, you know, 10s of millions if not billions of
00:37:13 --> 00:37:14: square feet.
00:37:14 --> 00:37:16: We're impacting through our practice.
00:37:16 --> 00:37:19: And I think that's what the design profession really has
00:37:19 --> 00:37:19: led.
00:37:19 --> 00:37:22: The charge lead is a great example of that.
00:37:22 --> 00:37:23: V5 takes up the rank.
00:37:23 --> 00:37:26: The ashtray engineers are amazing partners to that.
00:37:26 --> 00:37:30: Many mechanical and now structural are thinking that way and
00:37:30 --> 00:37:33: my colleagues have A and EI mean the reality is
00:37:33 --> 00:37:36: the design mind profession, as small as we are, has
00:37:36 --> 00:37:39: had great influence on our clients, your ULI clients, because
00:37:40 --> 00:37:42: we all recognize this is the right thing to do.
00:37:42 --> 00:37:45: And it has, as you know, number one and two
00:37:45 --> 00:37:47: findings have said the economics makes sense.
00:37:47 --> 00:37:51: First cost get beyond that, it's life cycle value.
00:37:51 --> 00:37:53: And I think that's really the shift to whole life
00:37:53 --> 00:37:56: thinking that, you know, 20 years ago as a client,
00:37:56 --> 00:38:00: when I talked to architects, engineers, they didn't have whole
00:38:00 --> 00:38:00: life.
00:38:00 --> 00:38:02: You mean the project isn't done when we you know,
00:38:02 --> 00:38:03: you move end of the building?
00:38:04 --> 00:38:07: It's that life cycle mindset of OPS and having operated
00:38:07 --> 00:38:10: buildings, I saw the worst case of not thinking about,
00:38:10 --> 00:38:14: you know, well-being energy resources, water resources.
00:38:14 --> 00:38:16: And you know, the team here on this call can
00:38:16 --> 00:38:17: talk about the success.
00:38:17 --> 00:38:20: The the clients are already on board.
00:38:20 --> 00:38:21: More clients are coming that way.
00:38:21 --> 00:38:24: And what's more important, as a quote said, it's a
00:38:24 --> 00:38:28: differentiator, whether it's commercial real estate or, you know, a

00:38:28 --> 00:38:31: campus recruiting the best and the brightest, like a large
00:38:31 --> 00:38:33: retail client we have in Bentonville, Arkansas.
00:38:34 --> 00:38:35: They want to do the right thing.
00:38:35 --> 00:38:38: It's in their brand, it's in their DNA, it's for
00:38:38 --> 00:38:39: their staff and their community.
00:38:39 --> 00:38:42: And that's really an important driver I think for any
00:38:42 --> 00:38:44: of the projects we're seeing, I think collectively.
00:38:45 --> 00:38:46: Absolutely.
00:38:46 --> 00:38:49: Let's move on to #4 here, but really quickly because
00:38:49 --> 00:38:52: adaptive reuse came out on top there.
00:38:52 --> 00:38:54: I just wanted to put a quick plug that it's
00:38:54 --> 00:38:57: not even up for registration yet, but you and I
00:38:58 --> 00:39:01: will be holding a webinar on adaptive reuse in early
00:39:01 --> 00:39:01: March.
00:39:01 --> 00:39:03: I think it's March 6th.
00:39:03 --> 00:39:05: I don't have a registration link for y'all yet.
00:39:05 --> 00:39:07: So we're still planning it, but please keep an eye
00:39:07 --> 00:39:09: out for that if you're interested in adaptive reuse.
00:39:09 --> 00:39:11: So we're going to be covering a couple of our,
00:39:11 --> 00:39:12: our reports that have been published lately.
00:39:12 --> 00:39:14: And Shreya, if you want to go ahead and drop
00:39:14 --> 00:39:16: some of those report links into the the chat for
00:39:16 --> 00:39:18: participants, that would be great.
00:39:18 --> 00:39:21: And now we'll go into #4 which I'm sure a
00:39:21 --> 00:39:25: lot of folks are interested to hear about the rise
00:39:25 --> 00:39:28: of AI as both the sustainability tool and a resource
00:39:28 --> 00:39:29: challenge.
00:39:30 --> 00:39:33: Sustainability leaders said that a is potential to advance sustainability.
00:39:34 --> 00:39:40: Sustainability including, you know, streamlining reporting, streamlining data collection, data
00:39:40 --> 00:39:42: analysis and decision making is, is huge.
00:39:43 --> 00:39:46: But we all know that this rapid growth of what
00:39:46 --> 00:39:50: is often energy and water hungry data centers can pose
00:39:50 --> 00:39:51: some challenges.
00:39:51 --> 00:39:52: So we have another quick slide.
00:39:52 --> 00:39:54: Oh, for y'all on the call, if we go to
00:39:54 --> 00:39:55: the next slide.
00:40:03 --> 00:40:08: How do you see AI impacting sustainability outcomes in real
00:40:08 --> 00:40:10: estate over the next few years?
00:40:11 --> 00:40:13: Please take a few minutes to respond.
00:40:15 --> 00:40:16: And then as, as folks are responding to the slide,

00:40:17 --> 00:40:18: oh, we'll keep the slide.
00:40:18 --> 00:40:19: Oh, up for a little bit here.
00:40:19 --> 00:40:21: Do you want to let's, let's kick off a little
00:40:21 --> 00:40:22: bit of conversation here.
00:40:22 --> 00:40:25: I know Alessandro, you wanted to talk a little bit
00:40:25 --> 00:40:28: about the the potential of AI on the building technology
00:40:28 --> 00:40:29: side.
00:40:30 --> 00:40:33: Yeah, I, I think as you mentioned, I mean it
00:40:33 --> 00:40:36: presents a huge opportunity, but also a, a challenge.
00:40:36 --> 00:40:38: So I'll, I'll talk about a few of the opportunities
00:40:38 --> 00:40:40: and is a very, very broad subject.
00:40:40 --> 00:40:43: So first and foremost, streamlining ESG reporting.
00:40:44 --> 00:40:48: Absolutely it, you know it, it automates complex data collection
00:40:49 --> 00:40:52: validation reporting reduces manual efforts.
00:40:52 --> 00:40:56: APEC organizations are reporting a 60% drop in reduction of
00:40:56 --> 00:41:00: data collection, moment hitting, consistency and transparency.
00:41:00 --> 00:41:03: But specifically in the work that we do, it comes
00:41:04 --> 00:41:06: down to data and data aggregation.
00:41:06 --> 00:41:10: IoT sensors are becoming cheaper, more ubiquitous, and the amount
00:41:10 --> 00:41:12: of data is tremendous.
00:41:12 --> 00:41:15: A lot of clients just stored away, they don't look
00:41:15 --> 00:41:15: at it.
00:41:16 --> 00:41:18: This is where AI can come in and shine.
00:41:18 --> 00:41:21: They can look at that data and then provide meaningful
00:41:21 --> 00:41:24: insight and how to manage a building better.
00:41:24 --> 00:41:27: And we see that on average we find a 15
00:41:27 --> 00:41:32: to 25% energy reductions just by using AI driven dynamic
00:41:32 --> 00:41:34: optimization for buildings.
00:41:35 --> 00:41:39: And then the next step for that is predictive analytics.
00:41:39 --> 00:41:41: So specifically looking at inefficiencies.
00:41:41 --> 00:41:47: So AI tools can predict equipment failures, performance degradation, operational
00:41:47 --> 00:41:53: inefficiencies by analyzing trends over time and can reduce downtime
00:41:53 --> 00:41:56: by up to 70% and lower maintenance costs.
00:41:56 --> 00:42:00: So that's on the operational carbon side, but there's also
00:42:00 --> 00:42:03: an opportunity on the embodied carbon side.
00:42:03 --> 00:42:06: So some of the work that we're doing for actually
00:42:06 --> 00:42:11: adoptive reuse projects is for a client typologies where we
00:42:11 --> 00:42:12: have a huge data set.

00:42:12 --> 00:42:16: We can train machine learning models to predict embodied carbon

00:42:16 --> 00:42:18: during this schematic design phase.

00:42:18 --> 00:42:23: And then we use charettes throughout the process to actually

00:42:23 --> 00:42:28: improve material choices, design choices and reduce life cycle across

00:42:28 --> 00:42:29: the board.

00:42:29 --> 00:42:31: And I think this is where it's going to shine

00:42:31 --> 00:42:33: also on the embodied carbon side.

00:42:34 --> 00:42:37: Then there's the AI agents and tools.

00:42:37 --> 00:42:40: We have been using AI tools to sort through and

00:42:40 --> 00:42:44: read mechanical drawings and building codes to help our our

00:42:44 --> 00:42:46: documentation team work faster.

00:42:47 --> 00:42:51: The biggest help has come from AI tools that can

00:42:51 --> 00:42:55: sort through EPD and HPD documentation to pull out carbon

00:42:56 --> 00:42:57: and health information.

00:42:58 --> 00:43:01: What normally took us an average of 80 hours to

00:43:01 --> 00:43:04: documents is now taking us only a few hours because

00:43:04 --> 00:43:05: of these tools.

00:43:06 --> 00:43:09: We've also worked with two companies to set up AI

00:43:09 --> 00:43:15: agents that can help engineers with calculation, documentation, and specification

00:43:15 --> 00:43:16: work.

00:43:16 --> 00:43:20: However, I admit that has been with very limited success.

00:43:20 --> 00:43:27: I think that there's too much variance in projects, especially

00:43:27 --> 00:43:29: with building codes.

00:43:29 --> 00:43:31: We, we work across 45 countries.

00:43:31 --> 00:43:34: It's almost impossible right now for an agent to be

00:43:34 --> 00:43:35: able to cover all of it.

00:43:35 --> 00:43:39: So we're, we're drilling down into very common building topologies

00:43:39 --> 00:43:43: that we have interiors projects, retail, which is where we

00:43:43 --> 00:43:46: specialize in and that is marginally useful.

00:43:46 --> 00:43:49: But I do see that there's a strong opportunity for

00:43:49 --> 00:43:52: that to enhance engineer efficiency.

00:43:53 --> 00:43:57: So overall, I think AI has an opportunity to fundamentally

00:43:57 --> 00:44:01: improve data quality in in governments.

00:44:01 --> 00:44:05: However, there's a risk of bias amplification if the training

00:44:05 --> 00:44:08: data set is incomplete or unresponsive.

00:44:08 --> 00:44:11: And specifically for APAC, that is a problem because we

00:44:11 --> 00:44:16: don't have a standardization of building performance data, product data

00:44:16 --> 00:44:19: and then embodied carbon databases are still developing.

00:44:20 --> 00:44:22: So ultimately it's a tool, but it's up to us
00:44:22 --> 00:44:24: to implement it in a in a current.
00:44:24 --> 00:44:26: Yeah, that is such a great point that it's a
00:44:26 --> 00:44:29: great tool, but the optimization is key and that we
00:44:29 --> 00:44:32: we need to be responsible for filling in those missing
00:44:32 --> 00:44:35: pieces and make sure that the models are correct, the
00:44:35 --> 00:44:37: outputs are correct and that it is, you know, a
00:44:37 --> 00:44:38: work, a work in process.
00:44:39 --> 00:44:40: So that is really important.
00:44:40 --> 00:44:43: Jocelyn, do you want to talk a little bit more
00:44:43 --> 00:44:45: about the other side, the outcomes in terms of, you
00:44:45 --> 00:44:48: know, energy and water use from a, you know, a
00:44:48 --> 00:44:50: more of a data center developer perspective?
00:44:51 --> 00:44:51: Sure.
00:44:51 --> 00:44:51: Yeah.
00:44:51 --> 00:44:52: Thanks, Kara.
00:44:52 --> 00:44:55: And I'll just build a little on what Alessandro said
00:44:55 --> 00:44:59: in that it's really important that that we acknowledge the
00:44:59 --> 00:45:02: benefit of AI and helping us to solve some of
00:45:02 --> 00:45:05: the problems that AI is, is also contributing to.
00:45:05 --> 00:45:08: So as long as we are focused on sort of
00:45:08 --> 00:45:11: human LED and, and not, not so much just sort
00:45:11 --> 00:45:15: of humans as an afterthought or looped in on the,
00:45:15 --> 00:45:18: on the math that it's really human LED and that
00:45:18 --> 00:45:21: we are thinking through how we best use those tools.
00:45:22 --> 00:45:25: It it also goes back to what Reeves was saying
00:45:25 --> 00:45:29: about the power that designers and engineers have to influence
00:45:29 --> 00:45:33: and sort of inspire our clients to continue to move
00:45:33 --> 00:45:36: in the right direction on sustainability.
00:45:36 --> 00:45:39: I think AI has a lot it can do to
00:45:39 --> 00:45:43: to help the design and engineering world help our clients
00:45:43 --> 00:45:45: build great places.
00:45:45 --> 00:45:49: So what I will note that as HDR does work
00:45:49 --> 00:45:53: to design data centers, we are seeing an increase in
00:45:53 --> 00:45:59: demand obviously around the world for additional data centers to
00:45:59 --> 00:46:02: help support that AI use.
00:46:02 --> 00:46:06: A lot of the, the, the companies that are investing
00:46:07 --> 00:46:12: in data centers have sustainability goals and those haven't changed.
00:46:13 --> 00:46:16: But the scale and the rapidity at which data centers
00:46:16 --> 00:46:19: need to come online is really challenging.

00:46:20 --> 00:46:24: It's challenging to companies who have committed to sustainability.

00:46:24 --> 00:46:26: It's also challenging for our utilities.

00:46:26 --> 00:46:31: So some of what companies and communities have committed to

00:46:31 --> 00:46:36: is, is something that needs to be spread over the

00:46:36 --> 00:46:37: long term.

00:46:37 --> 00:46:41: We might be looking at at future projects as opportunities

00:46:41 --> 00:46:44: for additional sustainability features to be added in.

00:46:44 --> 00:46:48: So we're pushing toward innovation.

00:46:48 --> 00:46:50: Both clients and communities are really pushing the the data

00:46:50 --> 00:46:52: center industry toward innovation.

00:46:52 --> 00:46:54: Things like heat capture, right?

00:46:54 --> 00:46:56: We know that data centers generate a lot of heat.

00:46:56 --> 00:46:59: Are there ways for us to recapture that heat and

00:46:59 --> 00:47:02: use it either on site or in district systems?

00:47:02 --> 00:47:05: We're looking at ecological approaches to the exterior landscapes of

00:47:05 --> 00:47:08: data centers so that they can integrate better into their

00:47:08 --> 00:47:08: landscapes.

00:47:09 --> 00:47:12: But again, the industry is moving really rapidly, so we

00:47:12 --> 00:47:15: also have to be responsive to that and try to

00:47:15 --> 00:47:19: future proof the projects work with utilities to understand how

00:47:19 --> 00:47:20: we can scale up over time.

00:47:20 --> 00:47:24: So for example, utilities like the utilities in the West,

00:47:24 --> 00:47:28: a lot of them have renewable energy goals that they

00:47:28 --> 00:47:31: have set, but they are finding to be challenging to

00:47:31 --> 00:47:35: keep those commitments when the demand is increasing so quickly.

00:47:36 --> 00:47:41: So they're interested in working with data center partners to

00:47:41 --> 00:47:46: ramp up the energy production and and match demand.

00:47:46 --> 00:47:51: It can be very beneficial actually ultimately for a utility

00:47:51 --> 00:47:55: to have data centers on the grid because they offer

00:47:55 --> 00:48:00: this consistent demand that helps to balance out some of

00:48:00 --> 00:48:03: the peakiness of, of, of what we see in terms

00:48:03 --> 00:48:08: of power demand with residential and commercial clients.

00:48:08 --> 00:48:11: So that's not a, that's not necessarily a bad thing

00:48:11 --> 00:48:13: to have data centers on our on our grid.

00:48:13 --> 00:48:15: It's, it's what data centers want.

00:48:15 --> 00:48:16: It's what utilities want.

00:48:17 --> 00:48:18: The challenge is just pacing.

00:48:18 --> 00:48:20: So how can we scale up appropriately?

00:48:20 --> 00:48:22: How can we future proof these sites?

00:48:22 --> 00:48:26: How can we offer opportunities for for data centers to
00:48:26 --> 00:48:29: have power purchase agreements because on site is often not
00:48:29 --> 00:48:33: insufficient to meet meet their power demands to be sure
00:48:33 --> 00:48:36: that those data centers are able to operate on renewable
00:48:36 --> 00:48:39: energy in the future and are able to plug into
00:48:39 --> 00:48:40: an efficient grid.
00:48:41 --> 00:48:45: So that that's really where where people are looking right
00:48:45 --> 00:48:48: now is how do we think about matching the current
00:48:48 --> 00:48:50: pace with a long term look at making sure that
00:48:50 --> 00:48:54: data centers are tapping into our grid, tapping into renewable
00:48:54 --> 00:48:57: energy and being a good part of the community.
00:48:59 --> 00:49:00: Thank you.
00:49:00 --> 00:49:01: No, I think that's really interesting.
00:49:01 --> 00:49:05: And honestly, I feel like what Alessandro, you and Jocelyn
00:49:05 --> 00:49:08: both said are very similar in a lot of ways
00:49:08 --> 00:49:11: where there's potential is there we just need to manage
00:49:11 --> 00:49:14: the the risks and the gaps and fill it in
00:49:14 --> 00:49:16: appropriately and be intentional.
00:49:16 --> 00:49:19: So whether that is planning for, you know, site locations
00:49:19 --> 00:49:22: of new data centers, we're making sure that that the
00:49:22 --> 00:49:25: models on the on the AI side are, are, are
00:49:25 --> 00:49:28: usable and and are correct are really important pieces that
00:49:28 --> 00:49:32: there's a lot of potential there, but it's not, we're
00:49:32 --> 00:49:35: not quite at a perfect system yet or wherever we'll
00:49:35 --> 00:49:36: be based on the time.
00:49:36 --> 00:49:38: I'm going to move ahead to our last slide.
00:49:38 --> 00:49:43: Oh, for topic #5 S #5 is operationalizing physical resilience
00:49:43 --> 00:49:46: in response to escalating climate impacts.
00:49:47 --> 00:49:49: Firms are seeing demand from real estate companies for the
00:49:49 --> 00:49:51: funding of resilience measures.
00:49:51 --> 00:49:53: And as I mentioned earlier, we have seen this across
00:49:53 --> 00:49:56: the board in terms of global sustainability outlook.
00:49:56 --> 00:49:59: So this is nothing new, but very curious to hear
00:49:59 --> 00:50:01: from those on the call of us today on what
00:50:01 --> 00:50:06: factor is most effectively driving action on physical climate resilience
00:50:06 --> 00:50:08: with your organization today.
00:50:08 --> 00:50:10: Or, you know, if if your organization isn't thinking about
00:50:11 --> 00:50:13: climate resilience, you know what is driving action, you know,
00:50:13 --> 00:50:14: in the industry today.
00:50:16 --> 00:50:20: And we'll kick off a short conversation about this.
00:50:20 --> 00:50:22: Mina, we haven't heard from you in a bit.

00:50:22 --> 00:50:24: We're going to talk a little bit about physical resilience.

00:50:24 --> 00:50:26: Here of course, and I think that I think I

00:50:27 --> 00:50:30: would just start by saying that physical resilience is really

00:50:30 --> 00:50:32: rapidly becoming the next valuation differentiator.

00:50:32 --> 00:50:35: We talked about how we value assets and what good

00:50:35 --> 00:50:38: looks like and I think physical resilience in relation to

00:50:38 --> 00:50:41: climate and other natural sort of phenomenons or disasters that

00:50:41 --> 00:50:44: may come along our way are really becoming the next

00:50:44 --> 00:50:47: value differentiator in in the built environment sector in general.

00:50:47 --> 00:50:51: From heat to flooding to water, stress and grid instability

00:50:51 --> 00:50:54: are no longer necessarily future risk because we see more

00:50:54 --> 00:50:57: and more unfortunately them happening everywhere around the world and

00:50:57 --> 00:50:59: affecting the asset performance.

00:50:59 --> 00:51:03: And we're also seeing therefore a growing demand for in

00:51:03 --> 00:51:05: the industry from a climate informed design.

00:51:05 --> 00:51:08: And again, I, I wear my architect and environments engineer

00:51:08 --> 00:51:10: hat as I speak this as this is where my

00:51:10 --> 00:51:12: experience mostly is based on.

00:51:12 --> 00:51:15: But this having a very integrated climate informed design that

00:51:16 --> 00:51:20: links resilience directly to operational continuity insurance and long term

00:51:20 --> 00:51:23: value is something that is more and more asked by

00:51:23 --> 00:51:24: our clients.

00:51:24 --> 00:51:27: And we see the demand also emerging in other parts

00:51:27 --> 00:51:29: or in other sectors as well.

00:51:29 --> 00:51:32: And I think as designers, I would say our role

00:51:32 --> 00:51:35: is quite significant because we shape resilience long before it

00:51:35 --> 00:51:39: becomes an operational issue where all these sketching ideas of

00:51:39 --> 00:51:41: what the building could be and could stand in the

00:51:41 --> 00:51:42: next century perhaps.

00:51:42 --> 00:51:44: And that has a quite a big impact on the

00:51:45 --> 00:51:48: physical resilience and performance of the physical resilience of that

00:51:48 --> 00:51:49: building.

00:51:49 --> 00:51:51: And I think I'm going to tie it back to

00:51:51 --> 00:51:55: perhaps something we discussed earlier where we talk about decarbonization.

00:51:55 --> 00:51:59: I think resilience is very much integrated with the decarbonization

00:52:00 --> 00:52:04: planning and frameworks we're developing, working on it and considering

00:52:04 --> 00:52:09: because through climate informed site planning, passive survivability, envelope design

00:52:09 --> 00:52:13: and also infrastructure integration as part of decision making process

00:52:14 --> 00:52:17: when it comes to creating a decarbonized built environment and

00:52:17 --> 00:52:20: longer term resilient built environment.

00:52:20 --> 00:52:23: We really need to create buildings that really and are

00:52:23 --> 00:52:26: able to not only meet the carbon targets or many

00:52:26 --> 00:52:29: ESG criteria and performance criteria that we may define critical

00:52:30 --> 00:52:32: today or maybe for the next century, but also that

00:52:32 --> 00:52:36: they need to remain functional under stress, protecting both the

00:52:36 --> 00:52:38: occupants and the long term asset value.

00:52:39 --> 00:52:42: And I think that's the challenge we face more and

00:52:42 --> 00:52:45: more and responsibility we face, we we shoulder more and

00:52:45 --> 00:52:48: more moving forward and understanding how do we ensure that

00:52:48 --> 00:52:52: that asset beyond performs well beyond its projected life and

00:52:52 --> 00:52:55: long into the hopefully a couple of next lives that

00:52:55 --> 00:52:58: it can have with renovation and upgrades that it may

00:52:58 --> 00:53:00: need to foresee in the coming future.

00:53:01 --> 00:53:01: But thank you.

00:53:03 --> 00:53:03: Fantastic.

00:53:03 --> 00:53:06: And just a quick note before we move on to

00:53:06 --> 00:53:07: some more commentary.

00:53:07 --> 00:53:09: It was neck and neck for a while there with

00:53:09 --> 00:53:12: regulatory requirements and recent climate crisises.

00:53:12 --> 00:53:14: And now once I said that, now we're again we're

00:53:14 --> 00:53:15: neck and neck.

00:53:15 --> 00:53:17: So it really feels like folks are are seeing the

00:53:17 --> 00:53:19: regulatory requirements push a lot of action.

00:53:19 --> 00:53:23: And then obviously our recent climate crisis sees with cost

00:53:23 --> 00:53:27: of inaction insurance and insurability on the lower side and

00:53:27 --> 00:53:31: and tenant expectations not even really making making the mark

00:53:31 --> 00:53:32: at this point.

00:53:33 --> 00:53:38: Reeves or Jocelyn, any, any insight here on Operation operationalizing

00:53:38 --> 00:53:39: physical resilience?

00:53:40 --> 00:53:42: I'll keep it short so Jocelyn can get a bigger

00:53:42 --> 00:53:42: one.
00:53:42 --> 00:53:44: I mean that the passion that you heard from our
00:53:44 --> 00:53:47: good friend Mina that's we all have that, you know,
00:53:47 --> 00:53:49: we have to look at that whole element.
00:53:49 --> 00:53:53: And I think just like sustainability 30 years ago, resilience
00:53:53 --> 00:53:54: now has a raft of resources.
00:53:55 --> 00:53:59: You know, Uli, great resource within the Resilience Center 10XI
00:53:59 --> 00:54:02: mean it's just we're sharing more and that's the key
00:54:02 --> 00:54:02: to success.
00:54:03 --> 00:54:04: It's not like I've got it and you don't.
00:54:05 --> 00:54:06: How do we apply?
00:54:06 --> 00:54:09: It may be unique to different design, planning, engineering, you
00:54:09 --> 00:54:13: know, commercial real estate firms, but we're sharing best practices
00:54:13 --> 00:54:15: and thank you ULI for that.
00:54:15 --> 00:54:19: However, however, and this came up with a great number
00:54:19 --> 00:54:22: of ULI talks in the in the larger hall, the
00:54:22 --> 00:54:27: basis the databases is sorely disappear, is disappearing and sorely
00:54:27 --> 00:54:28: lacking.
00:54:28 --> 00:54:31: We know the reality of the North, primarily the United
00:54:31 --> 00:54:34: States federal agency, you can see so used to be
00:54:34 --> 00:54:37: the go to resources aren't there as the base data
00:54:37 --> 00:54:39: to make decisions to actually understand things.
00:54:40 --> 00:54:42: And the private realm like State Street and others who
00:54:42 --> 00:54:45: have some great webinars too are rushing in.
00:54:45 --> 00:54:48: And so particularly with some research work we're doing in
00:54:48 --> 00:54:51: partnership with some of our clients, we're trying to find
00:54:51 --> 00:54:55: that dependable, predictable, real source of data to make decisions.
00:54:55 --> 00:54:58: And that's one of the next big things about physical
00:54:58 --> 00:54:58: resilience.
00:54:59 --> 00:55:02: You know, what is the impact, you know, freezing and
00:55:02 --> 00:55:04: and you know, cold snap in Texas.
00:55:04 --> 00:55:05: That's not what we think about.
00:55:05 --> 00:55:08: We think about drought, heat and fire.
00:55:08 --> 00:55:11: Well, you know, really is changing and the sources of
00:55:11 --> 00:55:12: knowledge are so important.
00:55:12 --> 00:55:16: And again, kudos to ULI and and many organizations are
00:55:16 --> 00:55:19: getting there to be trusted resources.
00:55:19 --> 00:55:21: We got to get there, but we need the trusted

00:55:21 --> 00:55:21: resources.
00:55:21 --> 00:55:24: With that, Jocelyn, you know your background is you were
00:55:24 --> 00:55:26: part of the trusted resource elements.
00:55:27 --> 00:55:27: Yeah.
00:55:27 --> 00:55:28: Thanks, Reeves.
00:55:28 --> 00:55:30: I'll just build a little on what you're saying.
00:55:30 --> 00:55:33: I think one of the things that is so important
00:55:33 --> 00:55:37: about thinking about resilience is, is context, right?
00:55:37 --> 00:55:40: The issues that we face here in Colorado are different
00:55:40 --> 00:55:43: than the ones that Reeves is facing and different than,
00:55:43 --> 00:55:46: you know, people around the globe who are on the
00:55:46 --> 00:55:48: call and participated in our in our discussion.
00:55:48 --> 00:55:51: So one of the things that is so important is
00:55:51 --> 00:55:54: to really root the, the solutions in the context of
00:55:54 --> 00:55:56: the place and, and also to, to do our best
00:55:56 --> 00:55:59: to predict how that the that context is changing with
00:55:59 --> 00:56:02: the arc of, of climate change and other and other
00:56:02 --> 00:56:05: factors that are that are sort of changing the built
00:56:05 --> 00:56:06: environment.
00:56:07 --> 00:56:10: So for example, here at HDR, we have built a
00:56:10 --> 00:56:13: resiliency tool that is designed to help clients look at
00:56:13 --> 00:56:17: their local context to do some scenario planning, to do
00:56:17 --> 00:56:21: some life cycle analysis for carbon, for water, and to
00:56:21 --> 00:56:26: integrate the social metrics of, of resilience like hazard, vulnerability,
00:56:26 --> 00:56:26: air quality.
00:56:27 --> 00:56:30: It tracks biodiversity and human health and that really gets,
00:56:30 --> 00:56:33: you know, special place for me as originally an ecologist,
00:56:33 --> 00:56:33: right?
00:56:33 --> 00:56:35: It's this, this systems thinking.
00:56:36 --> 00:56:39: So it's where, you know, data and technology I think
00:56:39 --> 00:56:42: need to come together with the more human aspects of
00:56:42 --> 00:56:45: how we're doing design to, you know, think about a
00:56:45 --> 00:56:49: systems approach to resiliency that is context specific and does
00:56:49 --> 00:56:52: its best to to look forward into the future.
00:56:52 --> 00:56:55: I'll just note too, that one of the things that
00:56:56 --> 00:56:59: we thought about in, in my previous role at Colorado
00:56:59 --> 00:57:03: State University was also kind of the hazard vulnerability and
00:57:03 --> 00:57:07: what can, what could our facilities and our built environment
00:57:07 --> 00:57:10: provide around natural disaster resilience?
00:57:10 --> 00:57:13: So what are the spaces that can actually, I mean,
00:57:13 --> 00:57:16: it's, it's, it's Speaking of operationalizing resilience, you know,

in
00:57:16 --> 00:57:19: the moment where you're facing a natural disaster, how can
00:57:19 --> 00:57:21: the built environment respond?
00:57:21 --> 00:57:24: How can we find places for people and animals to
00:57:24 --> 00:57:27: go when, you know, there are wildfires, for example, which
00:57:27 --> 00:57:29: is often what we're dealing with in Colorado.
00:57:29 --> 00:57:32: So how can we create places of refuge and how
00:57:32 --> 00:57:35: can we design with Co benefits in mind all the
00:57:35 --> 00:57:38: time so that a, a project is not just about
00:57:38 --> 00:57:42: say wastewater or a storm water management, but is also
00:57:42 --> 00:57:46: about heat island and also thinks about those those moments
00:57:46 --> 00:57:49: of of disaster and how it can either mitigate or
00:57:49 --> 00:57:52: provide places of refuge for people.
00:57:52 --> 00:57:55: So again, it's that systems thinking piece, but but really
00:57:55 --> 00:57:58: integrating the human side of it is really important.
00:57:59 --> 00:58:00: Absolutely agree.
00:58:00 --> 00:58:03: I like kind of closing out our conversation or coming
00:58:03 --> 00:58:06: to a close of our conversation with that systems thinking
00:58:06 --> 00:58:06: piece.
00:58:07 --> 00:58:09: So why don't we take down the the slide deck,
00:58:09 --> 00:58:12: Shreya, and just have us up on the screen for
00:58:12 --> 00:58:15: the last two or three minutes here so we can
00:58:15 --> 00:58:17: address any questions from the audience.
00:58:18 --> 00:58:19: Fantastic.
00:58:19 --> 00:58:20: There are a few questions out here.
00:58:21 --> 00:58:22: I'll read them aloud.
00:58:22 --> 00:58:24: And then if you have any final takeaways, we only
00:58:24 --> 00:58:26: have two minutes left because we had such great conversation
00:58:26 --> 00:58:27: throughout the day.
00:58:28 --> 00:58:31: Urban Field Studio asks or states that data centers not
00:58:31 --> 00:58:34: only need excessive energy, but also massive amounts of water.
00:58:35 --> 00:58:37: How do we deal with the sustainability of water?
00:58:38 --> 00:58:41: We actually have a development coalition water wise that you
00:58:41 --> 00:58:44: will live that will drop information in the chat if
00:58:44 --> 00:58:47: anyone on the on the panel wants to address that
00:58:47 --> 00:58:48: quickly.
00:58:48 --> 00:58:50: I mean if you have any other Q&A's add them
00:58:50 --> 00:58:54: quickly now and we can address them after the the
00:58:54 --> 00:58:54: webinar today.
00:58:55 --> 00:58:57: But any thoughts on water before we we close out

00:58:58 --> 00:58:59: and say our goodbyes?
00:59:00 --> 00:59:02: I'll just note that the what I said about energy
00:59:02 --> 00:59:04: when it comes to data centers, I think it's also
00:59:04 --> 00:59:04: true about water.
00:59:04 --> 00:59:07: We are moving in the right direction.
00:59:08 --> 00:59:11: And you know, a lot of what people associate as
00:59:11 --> 00:59:14: part of the water footprint of AI is also about
00:59:14 --> 00:59:18: chip manufacturing and other parts of the of the entire
00:59:18 --> 00:59:22: AI system that aren't necessarily just about data center operation.
00:59:23 --> 00:59:25: So, but I do think the data center operations is
00:59:25 --> 00:59:28: a great lever for us as design and engineering professionals
00:59:28 --> 00:59:31: to continue to pull because we kept, we can talk
00:59:31 --> 00:59:33: about alternatives to water cooled systems.
00:59:33 --> 00:59:37: We can talk about advances in technology that really help
00:59:37 --> 00:59:39: to move data centers in the right direction.
00:59:39 --> 00:59:43: And, and, and that is the direction that that data
00:59:43 --> 00:59:47: center designers and operators also want to go.
00:59:47 --> 00:59:51: There isn't resistance really to the idea that that reducing
00:59:51 --> 00:59:54: the water needs for data centers is an important goal.
00:59:54 --> 00:59:57: So I think we're moving in the right direction and
00:59:57 --> 01:00:00: and just thinking about how we can can create spaces
01:00:00 --> 01:00:03: that can be adapted to new technologies over time is
01:00:03 --> 01:00:04: really important.
01:00:05 --> 01:00:06: Agree.
01:00:06 --> 01:00:07: Thank you for that.
01:00:07 --> 01:00:10: With only a few moments left, I wanted to give
01:00:10 --> 01:00:14: my sincere thanks for all of you to participate today
01:00:14 --> 01:00:17: and those online too for participating in our slidos.
01:00:18 --> 01:00:19: I was surprised by some of the results.
01:00:19 --> 01:00:21: I don't know if you all on the panel were
01:00:21 --> 01:00:21: as well.
01:00:21 --> 01:00:22: I thought that was fascinating.
01:00:23 --> 01:00:26: Really excited about adaptive reuse and really excited about seeing
01:00:26 --> 01:00:29: what's ahead in 2026 and working with you all on
01:00:29 --> 01:00:32: the channel and hearing from you all on our webinar
01:00:32 --> 01:00:33: today.
01:00:33 --> 01:00:35: Everyone have a great rest of your day.
01:00:35 --> 01:00:38: We will share the recording and any other Q&A with
01:00:38 --> 01:00:39: the group in a few days time.
01:00:41 --> 01:00:42: Thanks all.
01:00:42 --> 01:00:43: Thank you.

01:00:43 --> 01:00:43: Everybody.
